Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	**)**	
	)	**WT 16-239**
Amendment of Part 97 of the	**)**	**RM-11708**
Commission's Amateur Radio Service	**)**	**RM-11759**
Rules to Facilitate High-Frequency	**)**	
Data Communications	**)**	

To: The Chief, Wireless Telecommunications Bureau
Via: Office of the Secretary

11/26/18 REPLY COMMENTS TO Craig McVeay 11/23/2018

I, Janis Carson, wish to reply to the James Russel comments FCC ID: 1123255992263
https://www.fcc.gov/ecfs/filing/1123255992263

1. McVeay states: "Whether the FCC acts upon NPRM 16-239 or not, drug cartels will use any means, legal or otherwise, to conduct their illicit business." Which makes the case for open identification and transmission to allow monitoring, as requested in the petition:
https://ecfsapi.fcc.gov/file/100918881206/PETITION%20FOR%20RULEMAKING.pdf
The Waterman comments at:
https://ecfsapi.fcc.gov/file/10123298305905/%2017-344.pdf
attempt to resurrect the matter of encryption. There is nothing new to add to the previous work the FCC already did. HIPPA does not require it. There are other radio services that are set up to take care of this, if needed. The FCC has already ruled on this matter. See:
https://apps.fcc.gov/edocs_public/attachmatch/DA-13-1918A1_Rcd.pdf
I should not have to remind HSB that we are at war with hostile elements who are using technology and social media to destroy us. While it is difficult to contain its spread, we need to keep such technologies to the extent possible in the hands of the trained professionals who defend us. MARS and SHARES has true emergency communications spectrum outside the amateur bands where encryption is legal and under proper supervision. I point this out here because the ARRL itself filed comments previously in RM-11699 *opposing* encryption. There is no need whatsoever to make encryption available for yacht owners free email, under the guise of emergency communications.

2. McVeay states: "Canada and Mexico both allow PACTOR 4 in the amateur bands and they all co-exist." Japan, which has a population of amateur radio operators comparable to the USA, does not permit wide band emissions throughout the DATA segments as ARRL and 16-239 proposes. There are other notable countries banning it. There has been significant factual evidence presented back as far as RM-11306 to demonstrate "congestion" and problems with spectrum sharing with the existing conditions *before* 16-239 is enacted.
https://ecfsapi.fcc.gov/file/1092719005718/Winlink%20Compilation%20pt2.pdf
https://ecfsapi.fcc.gov/file/1092719005718/exparte%20September%2026%202016%20attachment.docx
https://ecfsapi.fcc.gov/file/10925839109476/FCC%20exparte%20letter%209%2025%202016.docx
https://ecfsapi.fcc.gov/file/10925839109476/K7NHV%20Winlink%20Handout.pdf
https://ecfsapi.fcc.gov/file/10925839109476/Winlink%20compilation%20pt1.pdf

3. McVeay states: "Please use actual facts in your decision making process on this matter -

"what if", "could be", and "but it might" are not legitimate arguments to be used in rule making decisions."

a. The following is not a "what if", it is a clear declaration of intent to appropriate the entire DATA segments of amateur radio HF bands by a Winlink officer, Steve Waterman:
https://ecfsapi.fcc.gov/file/10123298305905/%2017-344.pdf
Page 4 & 5 "Part 97.221 allows a very small spectrum for actual data transfer, which falls under this ruling. For example, how much high-speed data at 2.4 KHz (Pactor 3) can be sent and received on the 40 Meter Part 97 spectrum totaling an allowable 5 KHz total? **But what about about two, three or a hundred such stations all operating simultaneously? After all, 2.4 KHz is the average bandwidth** for a voice LSB signal. Why would the modern Amateur not want more than 5 KHz on 40 metes or 15 Khz on other HF Amateur bands for digital operations such as data transfer? Considering the rise in digital communications in today's world, giving the users of Amateur radio in the United States a total 5 to 15 KHz for selected bands, renders such communications highly ineffective. This may be partially remedied to some extent by deletion of the antiquated and highly restrictive 300-baud symbol rate rule that the FCC eliminated with a 60 day STA, recently."

b. Simply computing the numbers in Waterman's stated intent, 100 stations simultaneously occupies 240 Khz, 80% of the 40 meter band in the USA. I remind you some IARU regions only have a 100 Khz allocation for 40 meters, taking their entire allocation for Waterman's free HF email. World wide propagation commonly occurs on HF in the 40 and 20 meter bands. We can project that Wateman's intent is to install 100 more free email store and forward stations on 20 meters (350 Khz total) taking roughly 70%. While 80 meters has shorter range, within 1000 miles of the coast it could serve for HF email as well; the math for that shows that 50% of 80 meters would be taken.

d. The FCC usually makes educated estimates for the purpose of spectrum allocation needs; that is the purpose of the FCC, to regulate. There are known factors to use in those estimates. For instance, the FCC ruled in spectrum horizons RM-11795 against the uncontrolled proliferation of garbage part 15 devices in valuable spectrum for the next generation cel service. The FCC chooses winners and losers in each rule making decision. The FCC recognizes its heavy responsibility, and uses objective tools to project the effects of those decisions, to maximize the public good. In this case, the FCC is weighing the continued access of 750,000 licensed amateurs against 10,000 maritime users of Winlink, and the relative contribution to the public good. McVeay is stuck in the mindset of only the short term, relatively modest needs of emergency users, which ignores the larger problem of 24/7/365 email by non emergency users. Likewise the ARRL (which only can objectively claim to represent 20% of hams) is pushing this for its purported role for emergency communications.

e. The estimated population of current maritime users of Waterman's free HF email system, Winlink is shown in this presentation to promote its use on page 2:
http://www.va3rom.com/docs/The%20Winlink%202000%20Hybrid%20Radio-Only%20Network.pdf
"Review of Winlink 2000 System
Provides e-mail from almost anywhere in the world.
Provides vital support for **10,000+ sailors**."

f. When I see these statements (not "what ifs) doubling down on spectrum demands, I do not dismiss them as if they were unimportant loud radical rants of an unhinged fanatic. I BELIEVE HIM, because Steve Waterman is part of the Winlink team that intends to make it happen, and is using any method at hand to influence the rule making. This fear of the Winlink Manifesto is not unreasonable. It is very important for the FCC to realize that Waterman's 100 stations per amateur HF band demand is NOT for short term emergency communications, it is for the constant non emergency use.

g. When we eliminate the high costs ($1800) of one of Helfert's SCS modems and replace it with a sound card mode like ARDOP or VARA (almost ready for release), existing maritime users are even more likely to use the Winlink free HF email system. Whether Sailmail adopts the new modes is unknown, but it still charges $250 a year and limits connect time to 90 minutes a day, which is not

enough to satisfy the current appetite for hyper connectivity.

h. When we allow for a huge influx of new licensees intended by recent rule making and petitions, this problem escalates dramatically. Yacht clubs and marinas will likely host "Technician in a Day" classes to promote even more free HF email. In RM-11759 and its contradictory pending petition for Technician privileges and license restructuring, the ARRL proposes allowing wide band data for new and existing entry level licensees. This includes Technician privileges to be a *control operator of a free HF email store and forward station*, despite not taking an exam on the questions related even just to the *use of such a system* that are included in the General exam.

i. Allowing for the figures and factors in e, g, and h, we can make projections the effect of 16-239 with respect to maritime users. Let's assume 12.000 current users to get round figures, and the current limit of 2 hours each per day. This would be periodic daily connect time sending stored email and receiving email as well as downloading grib files of weather. Lets assume 3 Khz for each station, allowing for a guard band between stations.

12000 users X 2 hours each / 24 hrs = 1000 HF email servers active all day.

1000 servers X 3 KHz = **3 MHz total needed for projected immediate need for maritime users.**

There is an important rule of thumb among network administrators that network slows down above 70% capacity but we will not invoke that factor.

If there are teenagers aboard, the estimates will be wrong by a considerable amount.

Now let's put the current projection for 12,000 maritime users against the actual spectrum available.

The entire USA DATA segment aggregate spectrum is only 907 Khz, about 1/3 of what is required.

The entire USA amateur HF spectrum is only 3.75 MHz, barely enough for current users, if they take all of it.

Factoring in the ARRL proposal to allow wide band data for new and existing Tech licenses: 750,000 total amateurs / 375,000 techs current or a doubling of band occupancy. I estimate that would be expressed at least proportionately. The figures above for estimated need show insufficient spectrum for existing need, and the pending license restructuring would *double the need, based on existing Tech licensees. This* does not account for NEW Tech licenses resulting from the licensing petition.

j. I wish to immediately submit these projections for analysis by the FCC as part of its decision making in 16-239 rule making to rebut the unfounded assertions of McVeay with factual predictive analysis of the non emergency data occupancy of the amateur HF spectrum. These alarming numbers are fact based, not some highly speculative guess based on unreal assumptions. "A poultry farmer was distressed because his chickens stopped laying eggs. He didn't know what to do about it, but one of his friends, a physicist, offered to help. The physicist called the farmer later on the phone and said: "Okay, I have a solution for your problem, but it only works with spherical chickens in a vacuum.""

k. In response to the ARRL and Waterman, the FCC proposes to abolish all band width limitations and allow that wide band automatically controlled data throughout the amateur HF DATA segments. That is the equivalent of NHTSA eliminating speed limits, all the lane lines and medians on our super highways, promoting self driving tandem tractor trailers, and telling the commuters to fend for themselves. We do not need Rocket Science to predict a huge wreck. Please consider this analysis and reject the current 16-239 or revise it to restrict wide band automatic data transmissions to the ACDS band segments. The ARRL and Winlink and Steve Waterman can debate how much spectrum they think they need, and provide justification to show cause why it should be granted. This is totally separate from the legitimate emergency communications amateur radio provides for the public good.

l. I wish to thank McVeay as well as other amateurs for their public service.

Respectfully submitted,

/S/

Janis Carson AB2RA, licensed since 1959, ARRL member